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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,015	03/17/2004	Kimihiro Kikuchi	9281-4762	5124

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EXAMINER	
LAZORCIK, JASON L	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,015	KIKUCHI, KIMIHIRO	
	Examiner	Art Unit	
	JASON L. LAZORCIK	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-9 and 11-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-9, 11-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/06/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 5, 2008 has been entered.

Status of the Claims

Applicants reply dated November 5, 2008 amends independent claims 1, 20. All other claims stand as previously presented in Applicants reply dated March 14, 2008.

Claims 5 and 10 stand as cancelled by Applicant.

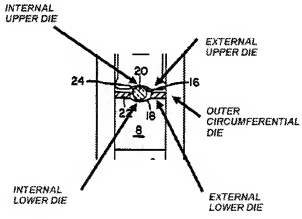
Claims 1-4, 6-9, 11-22 are pending for prosecution on the merits.

Claims 1-4, 8, 11-15, and 18-22 are rejected under 35 U.S.C. 102(b) as anticipated by Demerritt (US 5,274,502) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Demerritt (US 5,274,502) in view of Tanabe (Japanese Patent Publication JP05-066302).

Demerritt teaches formation of a holder/optical-element assembly. As depicted in Figure 1, a blank (20) of optical material is positioned within a cylindrical holder

material (22) having an "integrated form" and presenting an outer and inner circumferential surfaces. The blank and holder materials are loaded into the press molding die of a precision press mold, heated to a softened state, and pressed to thereby fix the optical element to the inner circumferential surface of the holder.

With respect to Applicants **Claims 21 and 22**, it is evident from the following annotated excerpt figure 1 that the Demerritt process utilizes the clamed internal and external dies for forming the surfaces of the optical element and the circumferential surfaces of the cylindrical holder, respectively. Further, Demerritt teaches the use of an outer circumferential die for forming the outer circumferential surface of the cylindrical holder.



In one preferred embodiment (see Figure 4 excerpt below), Demerritt teaches that the holder material may be provided with a concentric cavity or a "void part" located on the inner circumferential surface. Said void part extends out in a radial direction from the inner circumferential surface of the cylindrical holder material. It is the Examiners

assesment that execution of the disclosed press molding operation with the holder depicted in figure 4 would inherently result in the radial outward expansion of excess optical material from the outer edge of the optical element and into the void part.

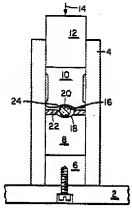
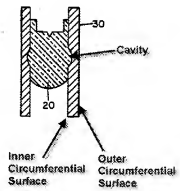


Fig. 1



(I) Demerritt inherently provides for partial filling of the void en route to the embodiment depicted in Figure 4

As noted in previous Official Actions, there exists a point in the Demerritt process wherein the extruded portion of optical element material does not completely fill the spatial volume of the void part or cavity. Applicants claim language neither implies nor inherently requires that pressing is terminated before complete filling of the cavity. As such the prior art process is construed to read upon Applicants claimed process wherein an extra volume is less than a volume of the void part of the cylindrical holder as recited in amended claims 1 and 20.

(II) Partial filling of the void part would have been derived through routine experimentation and optimization over the Demerritt disclosed process

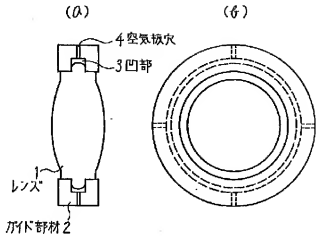
In the event that Applicant contests the Examiners above conclusion, namely that Demerritt teaches at least one configuration in the disclosed process wherein "the spatial volume of the void part is larger than the volume of the extra amount of the optical -element material" or wherein an extra volume of optical element material ... flows into the void part, but does not completely fill the void part", then it is the Examiners assessment that such limitations constitute an obvious extension over the Demerritt teachings in view of the ordinary level of skill in the art at the time of the invention.

Regarding this matter, Applicant was previously advised (see Official Action dated June 18, 2008) that one of ordinary skill in the art at the time of the invention would reasonably be expected to tailor the volume of starting material and the pressing conditions (e.g. pressure, pressing rate, etc.) utilized in the pressing operation. In the instant case, using less optical-element material than necessary to completely fill the void volume would provide distinct and predictable benefits, namely a more reproducible pressing operation. It follows that one of ordinary skill in the art would reasonably be expected to arrive at applicants claimed invention through no more than routine experimentation and optimization of the prior art disclosed process

(III) Partial filling of the void part rendered explicit by the Tanabe reference

In the event that Applicant further asserts that the relationship between the extra volume of optical element material and the void part volume is neither inherent to Demerritt nor that said operation constitutes a non-obvious advance over Demerritt, then it is the Examiners conclusion that such a relationship is made explicit in the closely related teachings of Tanaba (Japanese Patent Publication JP05-066302).

The reference to Tanaba teaches a method for fabricating a holder/optical-element assembly during press molding of the optical element material which one of ordinary skill would appreciate as closely related to the Demerritt disclosed process. With particular reference to figure 1a (see below excerpt), Tanabe teaches (see ¶[0009-00010]) that the optical element material (1) is placed within a holder material (2) and plastically deformed to a target lens shape via press molding . By this plastic deformation, lens material flows into the void (3) to for form an integral holder/optical element assembly. Regarding the relationship between the extra volume of optical element material and the volume of the void part, Tanaba explicitly teaches (see ¶[0010]) that "the quantity of a lens material and the volume of the crevice (3) to be used are adjusted ... so that a lens material may flow into the crevice (3) and may not overflow here" [**Claim 13**].



In view of the above cited passage and figure 1a from Tanabe reference, Applicant will appreciate that the instant reference contemplates adjusting the volume of optical element material and the volume of the void part in such a manner that the extra volume of optical element material flows into the void part, but does not completely fill said void part [**Claim 20**]. It follows, in view of the Tanabe teachings, that Applicants recited process limitations wherein "the spatial volume of the void part is larger than the volume of the extra amount of the optical -element material" and wherein an extra volume of optical element material ... flows into the void part, but does not completely fill the void part" constitute an obvious extension over the Demerritt disclosed process.

Regarding **Claim 11**, see Demerritt Col. 5, lines 63-65

With respect to **Claim 12 and Claim 18**, it is understood that a cylindrical holder of the type disclosed by Demerritt and/or Tanabe comprises "an outer portion forming an outer circumferential surface", that the holder material has an inherent resistance to flow, that the glass optical element material is inherently characterized by "a viscosity", a glass transition temperature and a glass softening temperature. Further in accord

with the fundamental laws governing fluid dynamics, "the flow resistance of the holder material" and specifically the resistance to flow experienced by the optical element material in the annular cavity necessarily and inherently varies inversely with the viscosity of the optical element material.

Regarding **Claim 14**, flow resistance of the holder material is understood to be an inherent function of the width of the cavity, and the flow resistance of the void part is understood to inherently vary with the viscosity/temperature of the glass optical element material [**claim 18**].

With respect to **Claim 15**, it is the Examiners assessment that at least one of the support materials employed by Demerritt as set forth in Table III displays a softening temperature which is higher than the softening temperature of the optical element materials set forth in Table II of the same reference.

Claims 6, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Demerritt (US 5,274,502) and Tanabe (Japanese Patent Publication JP05-066302) as applied to claim 1 under 35 USC 102(b)/103(a) above, and further in view of Neid (US 5,290,333).

Demerritt is silent regarding the presence of micropores in the void part" as set forth in claim 6 or "micro-pores on the inner circumferential surface" as set forth in Claim 7 for the purpose of retaining the projected portion of the optical element.

Neid teaches that the interlocking structure that arises when a glass penetrates the pores or cavities of a substrate "provides further mechanical bond strength by virtue of "the interlocking nature of the structure" (column 2, Lines 9-13).

It would therefore have been obvious to one of ordinary skill at the time of the invention to provide cavities or micropores on the inner circumferential surface or the surface of the concentric void in the Demerritt holder in order to provide such an interlocking structure between the radially extruded glass and the void surface. This would have been an obvious modification for one of ordinary skill seeking to enhance the structural stability and durability of the resulting structure by providing an interlocking structure.

Regarding Claim 9, the projected portion of optical element material (see Demerritt Figure 4 and figure 1(a) Tanabe) disclosed by Demerritt broadly construed as a "hemispherical section of the optical-element material"

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Demerritt (US 5,274,502) in view of Tanabe (Japanese Patent Publication JP05-066302).

(I) the Demerritt materials and methods are substantially identical to the disclosed and recited invention

Applicants Specification discloses but a single preferred optical element material, namely SFS01 lead oxide glass, which would be construed as substantially equivalent to the lead oxide glass optical element materials employed in the Demerritt reference (see particularly Glasses 1 and 2 from the Demerritt reference, Col. 10, lines 22-42). Regarding, the lens holder material, Applicants Specification indicates that in an exemplary embodiment the material may be selected from aluminum or stainless steel. With respect to this matter, Demerritt teaches holder materials including (see Table III, col. 10, lines 55-68) multiple steel compositions and brass which read directly upon Applicants recited embodiments. Finally, Applicant provides substantially no indication that the materials of construction are either limited or provide any critical results and Demerritt teaches that the technique is applicable to alternative glass and support materials (Col. 9, lines 19-25). In view of the foregoing, the Examiner concludes that the Demerritt and Tanabe disclosed materials and methods are substantially equivalent to those of the recited invention.

(II) The prior art is silent regarding the relative softening temperatures of the holder and optical element materials or the molding temperatures

Although the instant reference does not explicitly dictate that "the optical element material is heated to a temperature about 30 degrees lower than the softening temperature of the cylindrical holder material" as recited in **claim 16** or that "the softening temperature of the cylindrical holder material is about 30 degrees higher than the softening temperature of the optical element material" as recited in **claim 17**, said

limitations are deemed insufficient to patentably distinguish the claimed invention in view of the ordinary level of skill in the art at the time of the invention and absent evidence of substantially unexpected results.

(III) The recited materials and press molding temperatures would have reasonably been derived by the skilled practitioner in view of the prior art disclosures and the ordinary level of skill in the art at the time of the invention

Specifically, it is the Examiners assessment that the prior art method employs substantially identical class of optical element glass materials and a substantially identical class holder materials handled under similar process conditions to that utilized in Applicants disclosed process. One of ordinary skill in the glass molding arts would have reasonably expected the Demerritt or Tanabe processes to be successfully applicable to alternative and conventionally available optical element materials and alternate holder materials particularly where a broader applicability is expressly contemplated by Demerritt (Col. 9, lines 19-25). Selection of appropriate optical element and holder materials would constitute a routine endeavor for a skilled engineer in the optical element manufacturing arts and would dependent upon the specific application requirements. Therefore, absent unexpected results to the contrary and in view of the ordinary level of skill in the art, such a materials selection is not construed to not constitute a patentable distinction over the prior art disclosed process.

With respect to the foregoing, Applicant is respectfully advised that whether the rejection is based on inherency or on prima facie obviousness, jointly or alternatively, the burden of proof is the same. Specifically, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. Once a reference teaching a product appearing to be substantially identical is made the basis of a rejection, the burden shifts to the Applicant to show an unobvious difference (see MPEP §2112).

Similarly, should Applicant allege that the particular operating temperatures are not disclosed in the prior art references, it is the Examiners position that one of ordinary skill would reasonably be expected to optimize the particular temperatures as a matter of routine quality control and process optimization. With respect to this matter, MPEP §2144.05 states that "Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

It follows, absent any compelling evidence to the contrary, that Applicants claimed operating temperatures are either implicitly disclosed in the prior art or alternately that said temperatures would reasonably have been derived by one of

ordinary skill in the art by no more than routine experimentation and optimization of the prior art disclosed process.

Response to Arguments

In view of Applicants claim amendments and in further view of Applicant's arguments, see 8-9, filed November 6, 2008, with respect to the rejection of claims under 35 U.S.C. §112 and under 35 U.S.C. §102/103 over Bartman have been fully considered and are persuasive. The noted rejection of claims has been withdrawn.

However, upon further consideration of Applicants newly submitted references in the Information Disclosure Statement of November 6, 2008, a new ground(s) of rejection is made in view of over Demerritt under §102(b) or alternately over Demerritt in view of Tanabe.

Argument #1)

With respect to the prior issued rejection of claims over Demerritt, Applicant alleges that the Demerritt reference neither anticipates nor renders obvious the claimed invention. In support of this position, Applicant points to Figure 4 of the reference asserting the optical element material in the Demerritt process "completely fills in the void" and thereby concludes that Demerritt discloses the extra volume as "equal to the volume of the void part and not less".

2. In response, Applicant is advised that the instant arguments do not address the Examiners stated grounds of anticipation in view of the Demerritt reference, namely that

there exists a point in the Demerritt process wherein the extruded portion of optical element material does not completely fill the spatial volume of the void part or cavity. Applicants recited invention does not require that the pressing operation is terminated before the void volume is completely filled. Therefore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., pressing is terminated before the void part is completely filled with optical element material) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Further, Applicant alleges one of ordinary skill would recognize that the Demerritt process "leaves no room for error" in the optical element volume and thereby concludes that one of ordinary skill would not arrive at the claimed incomplete filling of the void part.

Applicants arguments on this matter are not persuasive.

Specifically, Applicants allegation that Demerritt "leaves no room for error" with respect to the volume of the void part and the volume of optical element material is simply not supported either by evidence on the record nor by sound engineering principles.

Even permitting the assumption that Demerritt "leaves no room for error" for the sake of argument, which the Examiner considers not to be the case, one of ordinary skill

in the engineering arts would understand that such a measurement necessarily includes glass volumes slightly greater and slightly less than the stated, ideal number. That is, one of ordinary skill would reasonably understand that every engineering process is associated with a given tolerance or an associated process error such that an ideally specified volume necessarily implies volumes slightly greater and slightly less than that volume due to the inherent variance in the process.

The foregoing statements notwithstanding, Applicant has simply provided no evidence to support the allegation that Demerritt "leaves no room for error" in the relative volumes of the void part and the optical element material. Since these allegations are not supported explicitly or implicitly in the prior art reference and since Applicant has provided no conclusive evidence in support of the instant allegations, it follows that said allegations are held to be mere conjecture and attorney argument.

The Official policy regarding Attorney argument is clearly outlined in MPEP §2145 [R-3];

> "Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. See MPEP § 2129 and § 2144.03 for a discussion of admissions as prior art. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness."). See

MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. LAZORCIK whose telephone number is (571)272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason L Lazorcik/
Examiner, Art Unit 1791